CLAIMS

1. An Application Gateway Module (2) suitable for use in a telecommunication system wherein a service network (20) authenticates a user (1; 9) and authorises the user for accessing a service (5; 6) offered by a service provider (30), the Application Gateway Module (2) arranged for intercepting (I-2, I-4; I-2x, I-4x) application messages between the user and the service and for identifying said user and said service, and including:

    - means for obtaining an authorisation decision (I-3; I-3x) on whether the user is allowed to access the service;

    the Application Gateway Module (2) **characterised by** comprising:

    - means for assigning a service session identifier (Service_Context_ID) intended to identify those application messages exchanged between the user and the service and that belong to a same service delivery authorised for said user;

    - means for configuring a first finite-state machine (SCSM) with a number of status intended to identify specific events in service delivery where service progression can be controlled; and

    - means for activating service policies (SF) applicable to said specific events and resulting in a state transition.

2. The Application Gateway Module of claim 1, wherein the means for assigning a service session identifier (Service_Context_ID) include means for initiating a specific instance of the first finite-state machine

(SCSM), said specific instance being identified by the assigned service session identifier (Service_Context_ID).

3. The Application Gateway Module of claim 2, wherein the means for activating service policies (SF) include means for setting at least one element selected from a non-exhaustive list of references and attributes that comprises: a number of message field values to match, a number of specific actions to carry out on matching, a number of timer values to run, and a number of transactions to supervise.

4. The Application Gateway Module of claim 2, wherein the means for activating service policies (SF) include means for activating a global service policy independently of any service delivery in progress.

5. The Application Gateway Module of claim 2, wherein the means for activating service policies (SF) include means for initiating an instance of a global service policy to apply as an individual service policy within a specific instance of the first finite-state machine (SCSM), the individual service policy inheriting references and attributes from the global service policy.

6. The Application Gateway Module of claim 5, further comprising means for overwriting references and attributes of an individual service policy with new references and attributes during a service progression handled within a specific instance of the first finite-state machine (SCSM).

7. The Application Gateway Module of claim 5, wherein a particular state is associated with a number of individual service policies (SF-31; SF-32) within a specific instance of the first finite-state machine

(SCSM), said instance identified by a given service session identifier (Service_Context_ID).

8.   The Application Gateway Module of claim 2, wherein the means for obtaining an authorisation decision include means for requesting a service authorisation from an Authorisation Module (3) as claimed in claim 15.

9.   The Application Gateway Module of claim 8, wherein the means for activating service policies (SF) include means for receiving from the Authorisation Module (3) at least one element applicable to set a service policy, the element selected from a non-exhaustive list of references and attributes that comprises: a number of message field values to match, a number of specific actions to carry out on matching, a number of timer values to run, and a number of transactions to supervise.

10. The Application Gateway Module of claim 8, wherein the means for activating service policies (SF) includes means for receiving a global service policy from the Authorisation Module (3).

11. The Application Gateway Module of claim 8, further comprising means for receiving references and attributes from the Authorisation Module (3) applicable to overwrite an individual service policy with new references and attributes during a service progression handled within a specific instance of the first finite-state machine (SCSM).

12. The Application Gateway Module of claim 8, further comprising means for notifying to the Authorisation Module (3) a specific event in service progression.

13. The Application Gateway Module of claim 8, further comprising means for requesting from the Authorisation

Module (3) a further processing to determine an appropriate action to go on with the service progression.

14. The Application Gateway Module of claim 13, further comprising means for receiving from the Authorisation Module (3) an instruction selected from: access granted without restriction, another service (serviceTER) to substitute a previous service requested (serviceBIS), forced logout, and indication of a state transition.

15. An Authorisation Module (3) suitable for use in a telecommunication system wherein a service network (20) authenticates a user (1; 9) and authorises the user for accessing a service (5; 6) offered by a service provider (30), the Authorisation Module arranged for deciding whether a user (1; 9) is allowed to access a service (5; 6) and having:

- means for receiving a service authorisation request (S-511) from an Application Gateway Module (2) as claimed in claim 1; and

- means for returning back to the Application Gateway Module (2) a response on whether the user (1; 9) is granted access to the requested service (5; 6);

the Authorisation Module (3) **characterised by** comprising:

- means for generating a service session identifier (Service_Context_ID) intended to correlate those application messages exchanged between the user and the service and that belong to a same service delivery authorised for said user;

- means for configuring a second finite-state machine (SPSM) with a number of status intended to identify specific events in service progression where the

Authorisation Module can act over the Application
Gateway Module to control the service progression; and

- means for determining service policies (SF) applicable
  to said specific events and resulting in a state
5   transition.

16. The Authorisation Module of claim 15, wherein the means
    for generating a service session identifier
    (Service_Context_ID) comprise means for including said
    service session identifier (Service_Context_ID) in the
10   response (S-512) to be returned to the Application
    Gateway Module (2) on whether the user (1; 9) is granted
    access to the requested service (5; 6).

17. The Authorisation Module of claim 16, wherein the means
    for generating a service session identifier
15   (Service_Context_ID) includes means for initiating a
    specific instance of the second finite-state machine
    (SPSM), said specific instance being identified by said
    service session identifier (Service_Context_ID).

18. The Authorisation Module of claim 17, wherein a
20   particular state is associated with a number of service
    policies within a specific instance of the second finite-
    state machine (SPSM), said instance identified by a given
    service session identifier (Service_Context_ID).

19. The Authorisation Module of claim 15, wherein the means
25   for determining service policies (SF) comprise means for
    including in the response (S-512) towards the Application
    Gateway Module (2) at least one information element to
    activate a service policy (SF-2) within a specific state
    in the Application Gateway Module, said at least one
30   information element selected from a non-exhaustive list
    of references and attributes that comprises:

- a number of message field values (Analyse-Info-SF-value; Logout-SF-value) to match;

- a set of actions to carry out on matching a given message field value;

5   - a number of new timer values (Timeout-value) to run; and

- a number of transactions to supervise.

20. The Authorisation Module of claim 19, wherein the means for including in the response (S-512) towards the

10   Application Gateway Module (2) at least one information element to activate a service policy include means for indicating that this is a global service policy to apply independently of any service delivery in progress.

21. The Authorisation Module of claim 16, further comprising

15   means for receiving a notification, from an Application Gateway Module (2) as claimed in claim 1, indicating a specific event detected in service progression.

22. The Authorisation Module of claim 16, further comprising means for receiving a request, from an Application

20   Gateway Module (2) as claimed in claim 1, asking for an instruction to proceed with a service progression.

23. The Authorisation Module of claim 22, further comprising means for sending towards the Application Gateway Module (2) an instruction selected from: access granted without

25   restriction, another service (serviceTER) to substitute a previous service requested (serviceBIS), forced logout, and indication of a state transition.

24. The Authorisation Module of claim 16, further comprising means for receiving an application message (I-7x; I-8x)

30   from at least one entity selected from a number of

application servers (7; 8) and provisioning systems, the application message including a given service session identifier (Service_Context_ID) intended to identify a specific instance of the second finite-state machine (SPSM) in the Authorisation Module (3).

25. A method for authorising a user (1; 9) of a service network (20) to access a service offered by a service server (5; 6) of a service provider (30), the user (1; 9) already authenticated by the service network, the server (5; 6) arranged to deliver a service that comprises a plurality of transactions by exchanging a plurality of application messages with the user (1; 9), the method comprising a step of:

- obtaining a first authorisation decision (I-3; I-3x) on whether the user is allowed to access the service;

the method **characterised by** comprising the steps of:

- generating and assigning a service session identifier (Service_Context_ID) intended to identify those application messages exchanged between the user and the service and that belong to a same service delivery authorised for said user;

- configuring at least one finite-state machine (SCSM; SPSM) with a number of status intended to identify specific events in service delivery where service progression can be controlled; and

- activating service policies (SF) applicable to said specific events and resulting in a state transition.

26. The method of claim 25, wherein the step of generating and assigning a service session identifier (Service_Context_ID) includes a step of initiating a

specific instance of the at least one finite-state machine (SPSM; SCSM), said specific instance being identified by the assigned service session identifier (Service_Context_ID).

5   27. The method of claim 26, wherein a particular state within the specific instance of the at least one finite-state machine (SCSM; SPSM) is associated with a number of service policies (SF-1; SF-2; SF-31; SF-32).

28. The method of claim 25, wherein the step of activating
10   service policies (SF) includes a step of setting at least one element selected from a non-exhaustive list of references and attributes that comprises: a number of message field values to match, a number of specific actions to carry out on matching, a number of timer
15   values to run, and a number of transactions to supervise.

29. The method of claim 25, further comprising a step of receiving at the service network (20) an application message originated at an entity selected from: a number of service servers (5; 6) of a service provider (30) and
20   a number of entities of a provisioning system, the application message, including a given service session identifier (Service_Context_ID) intended to identify a specific instance of the at least one finite-state machine (SCSM; SPSM).

25 30. The method of claim 25, wherein the step of configuring at least one finite-state machine comprises a step of configuring a first finite-state machine (SCSM) in an Application Gateway Module (2) as claimed in claim 1, and a step of configuring a second finite-state machine
30   (SPSM) in an Authorisation Module (3) as claimed in claim 15.